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## THE GENUS *CYPHOMA* IN FLORIDA

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*Cyphoma* is a group of few species confined to tropical America, comprising *C. emarginata* (Sowb.) of the Panamie region, *C. intermedia* (Sowb.) from the West Indies and northern South America,<sup>1</sup> and the following species occurring in southern Florida.

*Cyphoma* means a hump; not a nice name, but it sounds better in Greek, and is appropriate for these hunchbacked snails. De Montfort's name, *Ultimus*, formerly in use, was given because it was the last genus in his book. They are pretty shells, but the living animals are really lovely. They are not especially shy, and can be kept in captivity several days if fresh sea water is supplied.

*CYPHOMA GIBBOSA* (L.). Pl. 1, Figs. 5-8, 13-16.

This is a common species from the Lake Worth region to the Keys and in the West Indies, living on gorgonians from about four or five feet to the lower limit of the gorgonians they inhabit.

The special character of the shell is that the callus of the sides extends up high on the back, and thins out at the edge, so that its limit is scarcely visible except by the color, the callus being from cream buff to apricot buff, pinkish vinaceous or orange vinaceous in color, the uncovered middle of the back from pure white to cream buff. The interior varies from pure white to pink, nearly uniform or with white clouds in the middle and towards the ends.

The living animal is pale flesh tinted with crowded black rings over the mantle, the rings often more or less deformed; there is some ochraceous-orange tint within the rings and on the outer foot edges. The tail has a black median line and quite irregular

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<sup>1</sup> Dall (Bull. 37, U. S. Nat. Mus., p. 134) cited *Simnia intermedia* Sowb. from Hatteras to Brazil, but we have not seen Florida or East Coast specimens.

radiating lines towards the edges, also along lateral margins of the foot. The breathing siphon is narrow, not expanding at the end, which is edged with a black line. Tentacles dark.

The margins of the mantle may meet on the back, but often it is carried less extended, irregular areas of the shell remaining uncovered. Ordinarily the head is not extended in front of the shell.

The largest shells are about 35 mm. long 18 wide, but it is more commonly from 25 to 30 mm. long. The smallest seen, from Boynton, measures  $15.3 \times 7$  mm. About equally small, from Pompano, collected by Marguerite Robinson, measures  $15.5 \times 8.7$  mm. In some years most shells seem to run small. There is noticeable variation in the prominence of the transverse ridge. "*Ultimus*" precursor Dall, from the Costa Rican Pliocene, is merely a strong-ridged extreme of *C. gibbosa*, not differing from some recent specimens.

CYPHOMA MCGINTYI Pilsbry. Pl. 1, Figs. 3, 3a, 4, 11, 12.

This species was defined briefly in NAUTILUS 52: 108 from a somewhat discolored specimen of minimum size.

The shell is relatively longer than *C. gibbosa*, and the lateral callus, especially that of the right side, is thick and narrow relative to that of *gibbosa*, indistinctly crenulated, with a strong impression along the junction of callus with the back. The callus on the left side is more extended and diffused. The transverse dorsal ridge is very strong. The base and the callus all around are warm white, the transverse ridge of the back snow white. The back is elsewhere cameo pink to persian lilac, more or less invaded by white, which in old shells leaves only small areas of pink on the right side. Aperture cameo pink to daphne pink within, with a white spot in the position of the external ridge and more or less white clouded anteriorly.

Length 39.5 mm., width 16 mm.

Length 23.7 mm., width 10.6 mm.

Length 31 mm., width 15.5 mm.

Length 23.7 mm., width 11.4 mm.

This species has been found on gorgonians of the Atlantic beach below the lower inlet of Lake Worth to the Dry Tortugas, occurring with *C. gibbosa*, but always rare in comparison with that.

The living animal, Pl. 1, Figs. 3, 3a, 4, is nearly white, closely dappled with dresden brown, or towards the mantle edge sepia spots, or in other individuals nearly black spots. These are round

to shortly oval, some oblong. It differs from *C. gibbosa* by having solid spots, not rings, on the mantle. In some individuals a few of the spots have light centers, in others some spots may coalesce, forming short bars. The respiratory siphon is unlike that of *gibbosa* by being dark colored, trumpet shaped, much wider at the end than in *gibbosa* or *signata*, in which the siphon is white with a black border at the end, which is not expanded. The foot is profusely marked with oblique lines.

In large numbers examined alive, collected by the junior author and by Elizabeth Pilsbry, the characters separating this from *C. gibbosa* are conspicuous and constant.

CYPHOMA SIGNATA new species. Pl. 1, Figs. 1, 1a, 2, 2a, 9, 10.

The shell is relatively longer than *C. gibbosa*, resembling *C. mcgintyi* in shape. Like that species the ends are blunt, the lateral callus is thick, relatively narrow, and on the right side there is a strong impression along its upper edge. There is a very weak crenulation of the outer lip and its callus, as in *mcgintyi* and exceptional specimens of *gibbosa*. The transverse ridge of the back is very much lower than in *C. mcgintyi*. The aperture is slightly more dilated near the anterior end than in *gibbosa* or *mcgintyi*. Color cartridge buff with some faint pale pinkish-cinnamon suffusion above and below the nearly white dorsal ridge, and a cream buff tint deep in the aperture.

Length 35 mm., width 15 mm.

The living animal is like *C. gibbosa* in having the breathing siphon rather narrow, not expanding at the end, which is edged with black. The mantle is pale yellow, very closely marked with black transverse lines which in places diverge a little at the edges leaving little white triangles, and they are interrupted on the two sides by irregular white longitudinal lines. The foot is densely covered with fine, divaricating black lines radiating obliquely from the central line (fig. 1) on a pale yellow ground, deeper yellow towards the edges; sole white.

This is the rarest of the Cyphomas, but apparently has about the same distribution as the others, from the sea outside the South Inlet of Lake Worth to Key West, where one was taken by Miss Adele Koto. The type is 174045 ANSP.; paratypes in McGinty collection.

Our name for it in the field was "fingerprint cyphoma," from

the markings of the mantle. Unfortunately, the Roman police did not practice fingerprinting, so there seems to be no short word for that in Latin; "*digitisignatus*" would perhaps be a little too mouth-filling for busy malacologists.

A fossil specimen of this species was found by Mrs. Edith Marble Taylor in the bank between highway and canal near Loxahatchee, Florida. Unfortunately there are both Pleistocene and Pliocene shells in this bank, so that the age of this fossil is uncertain (fig. 10).

The shell differs from strongly angular examples of *C. intermedia* (Sowb.) by the heavily calloused, blunt ends, and many other peculiarities of form. *C. intermedia* is referred to *Simnia* by some authors, to *Ultimus* (= *Cyphoma*) by Tryon, with some doubt. It may belong to the former genus, but probably this will not be fully clarified until the animal is examined.

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## OXYSTYLA FROM WESTERN MEXICO

BY THOMAS L. MCGINTY

(Continued from January, 1939)

OXYSTYLA PONDEROSA (Strebel). The Heavy Oxystyla. Plate 2, fig. 1.

A fine series of this large handsome species was taken in the vicinity of Acapulco. A previous record for this species is listed in the Manual of Conchology, 25 miles N.E. of Acapulco, State of Guerrero, at an elevation of 1000 feet above the sea, collected by H. S. Smith.

Shell thick, large specimens rather dull, cuticle usually present giving some specimens a decided yellow-brown appearance, embryonic whorls slightly tipped with dark chestnut-brown, some very faintly, but totally lacking on only one specimen. Early whorls shading into brown or greenish-brown on the last whorl; often there is a violaceous tinge on the penult whorl and occasionally on the last whorl. There are traces of a single band generally broken on the fifth and penult whorls, with three bands quite continuous on the last whorl. There are numerous streaks more distinct on the penult whorl and dark growth-rest varices, generally two or more on the last whorl with one on the penult whorl. Peristome broadly bordered inside with black-brown